THE WILD TURKEY

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ZOOLOGICAL LEAFLET NO. 6

PUBLISHED BY

FIELD MUSEUM OF NATURAL HISTORY

CHICAGO

1924

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FROM GROUP, PRESENTED BY MR. STANLEY FIELD, IN FIELD MUSEUM OF NATURAL HISTORY.

FIELD MUSEUM OF NATURAL HISTORY
DEPARTMENT OF ZOOLOGY
CHICAGO, 1923

LEAFLET NUMBER 6

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One of the first forms of wild life to attract attention, in the early days of exploration and settlement in America, was the Wild Turkey. This splendid bird once ranged in abundance from the Atlantic coast to the Dakotas, and from Maine and southern Ontario to southern Mexico. It was found in every state in the Union except Washington, Oregon, California, Nevada, Utah, Idaho, Wyoming and Montana. Early in the history of the colonization, however, the turkey began its retreat and gradually retired to the wilderness in the more southern and western portions of its range, a retreat which has gone on steadily since then, with varying rapidity.

The early explorers and colonists were unanimous in speaking of the tremendous numbers of this magnificent species. When Francisco Fernandez reached the northern coast of Yucatan in 1517, he found great numbers of turkeys domesticated by the natives, as did Grijalva farther west in 1518, and Cortez a little later. The colonists in New England found a bountiful supply of these birds in the forests, and the use to which they put them is well exemplified by the prominent part the turkey plays in our Thanksgiving festivals today, a role which has come down to us from the first Thanksgiving of those early times. The French "voyageurs," in penetrating the western wilds, discovered the Wild Turkey in great numbers and recorded their gratefulness for the welcome food supply thus furnished. The accounts of Capt. John Smith,

Roger Williams, Father Marquette and La Salle, among many others, show clearly that the Wild Turkey must have existed in countless numbers.

As early as 1760, a change began to appear in these accounts, especially in those relating to the northeastern portions of the country. In this year there was written an article relating to southern Canada in which the writer remarks that turkeys were to be found "except in the neighborhood of plantations." In 1765, a writer in Maryland stated that Wild Turkeys, formerly abundant, were then rarely seen. In 1770 the species was reported as very scarce in Pennsylvania. By 1792, in Connecticut, the turkey had retired to the inland mountainous region, while in 1813 there was given what appears to be the last record of its occurrence for the entire state. In 1842 an author reports the species as "exceedingly rare in all parts of New England."

In the western states, the turkey held its own for a longer time, owing to the slower development of that region, and in 1846 great numbers were still reported from the bottom lands of the upper Mississippi. In 1892, however, it had almost totally disappeared from Minnesota. In 1893 it was given as rare, if at all present, in Michigan. In 1897 the same was true of Indiana. In 1903 it was all but extinct in Ohio; in 1907, practically extinct in Iowa; in 1915, extinct in Nebraska; in 1920 extinct in South Dakota. The exact date of disappearance in these states is uncertain. In Illinois it was thought by Ridgway to be extinct in 1913, but more recently it has been found to occur sparingly in extreme southern portions of the state. In Pennsylvania there is no doubt that the species still occurs in some numbers, locally, for as late as 1913 the game warden of that state reported 733 Wild Turkeys as having been killed by sportsmen during one

season. Farther south and west there are numerous localities in which the birds are still common, and records are given more or less regularly from southern Missouri, Mississippi, Arkansas, Oklahoma, Colorado, Texas, North and South Carolina, Louisiana, Florida and some other adjoining states. Even in these, however, the distribution is purely local, and the turkeys are confined to suitable localities in restricted areas.

It is unknown whence came the actual specimen from which the first recognized description of the species was written. It has been assumed that the bird was a domesticated one, descended from the Mexican race. It is certain that the domestic bird, today, shows much more resemblance to the form found in eastern Mexico than to those of other regions. The turkeys found by the Spaniards in Mexico, already domesticated by the Aztecs, were taken back to Spain, and by 1530 were well established in the poultry yards of that country. From Spain they were carried all over Europe and even, in time, found their way to the colonies in New England where they may have been crossed with the resident form of the forests, also occasionally domesticated. Some of the resultant mixed breed of New England may have been carried to Europe, but it is doubtful if one of these birds was the basis for the original scientific descriptions which apply too well to the east-Mexican race.

The source of the name "turkey" is likewise in doubt. Certain early writers say that the bird received its name from Turkey, from whence it was supposed to have come, but there is little evidence to show that there was ever much doubt as to the country of the turkey's origin. For some time, the species was confused with the Guinea-fowl which was, likewise, called "turkey," and both birds were classed as pheasant, peacock and even Guinea-fowl, until the various forms involved

were gradually classified properly. Another explanation of the origin of the name is sought in certain of the bird's notes which resemble the syllables, "turk-turk-turk—," from which the name "turkey" came to be applied to the bird itself, and this explanation is probably the true one.

The Aztecs called the gobblers "Huexolotl" and the hens "Cihuatotolin." The northern tribes named them variously, as "Neyhom" (Natick), "Tschikenum" or "Tschukinuuna" (Delawares), "Weenecobbo" (Chippewa), "Ma-yoka" (Biloxi), "Pah-quun" (Nanticoke), "Bloen" (Lenape), "Zizika" (Omahas) and "Fakit" (Choctaw). These northern tribes did not commonly domesticate the turkey as did the Aztecs, but made use of the wild birds which they hunted regularly. The plumage was manufactured into robes and blankets by a process of twisting each feather separately into strands of wild hemp which were then woven into a compact fabric.

The Wild Turkey is a handsome bird, its glossy plumage mostly greenish bronze with gold and coppery reflections, catching every turn of sunlight and shining like polished metal. Each feather of the neck, breast, flanks and upper back is squarely shorn and tipped with a band of velvety black which serves but to accentuate the glowing sheen of the remainder. The wings are blackish brown, crossed with bands of white. The head and upper neck are nearly bare, the skin rich purple or blue in color, sparsely set with rows of hair-like feathers. From the throat depends a wattle-like fold, and from the crown hangs a pencil-like projection of the skin, set with bristles and tipped with a slender tuft of the same. From the center of the breast springs a bunch of wiry feathers which trails downward, and in some superb examples, reaches the ground between the owner's feet.

The feet are light purple, armed with short but heavy spurs. In general appearance the bird thus resembles a fine example of the domestic turkey although there are certain differences which distinguish the two forms. Throughout most of the United States, except in the extreme southwest, the most striking difference is in the color of the rump, upper tail coverts and tail which are rich chestnut in the wild bird but white in the domesticated one. This characteristic shows the relationship of the barnyard fowl to the wild bird of eastern Mexico which presents the same color phase. Other differences, however, are noticeable without respect to locality. The domestic bird is somewhat smaller than the wild one, the naked skin of the head and feet often has faded into red and even orange, and the wattle of the "gobbler" has developed into an enormous dewlap which is never so pronounced in the wild form. These characters are of principal importance in the case of the domestic strain known as the Bronze Turkey which has descended with least change from its wild ancestor and which is most likely to be confused with it. There are, in addition, other strains of the domestic bird which are so widely different from any of the wild individuals that there is little doubt as to their character, even at a glance. As in the case of the Bronze Turkey, the names of these varieties are based, for the most part, on their distinguishing colors, and a Black, White, Buff or Blue-gray Turkey need not be described further, while the Narragansett breed could be characterized as the Steel-gray Turkey.

On the other hand there is a gradual but decided change in coloration exhibited by the Wild Turkey from one end of its range to the other, from the Mexican to the New England forms. On account of this

variation, naturalists have divided the species into several subspecies or geographical races, each of which is distinct from the others and occupies a separate area of distribution, although the races intergrade where the areas meet. At present, six of these races are recognized and named. The typical race or true Wild Turkey (*Meleagris gallopavo gallopavo*), is characterized by having the feathers of the lower back, rump, upper tail coverts and tail tipped with nearly pure white. It is confined to the humid valleys and lower hillsides of eastern Mexico, and does not reach the United States. To the northward, in the states of Coahuila, Nuevo Leon and Tamaulipas, this form intergrades with the Rio Grande Turkey (*Meleagris g. intermedia*) which crosses the Mexican boundary and ranges into middle northern Texas. In this form, the white of the posterior upper parts and tail is replaced by ochraceous buff. In northern Texas and extending over almost all of the whole eastern range of the species is found the North American Wild Turkey (*Meleagris g. silvestris*) in which the buff of the Rio Grande Turkey is deepened into rich chestnut. In southern Florida is found a very similar race, the Florida Turkey (*Meleagris g. osceola*), which differs from the northern race by having the white cross bars on the wing quills narrower. In the mountains of western Mexico, on the high plateau region, occurs the Mexican Wild Turkey (*Meleagris g. mexicana*), in which the tail, upper tail-coverts and lower rump are white, as in the east Mexican bird, while the lower back is rich black without pale tips to the feathers. This form does not cross into the United States, but is replaced in western Texas, New Mexico, Arizona and southern Colorado by Merriam's Turkey (*Meleagris g. merriami*), in which the lower back is also black with the succeeding upper parts broadly tipped with pale buff

or buffy white. Six races or subspecies are thus distinguished throughout the range of the species, four of which occur in the United States.

The differences by which the subspecies of the Wild Turkey are separated are, as may be noted, modifications of certain colors and markings. Although constant in each locality, they show an intergradation where the ranges of the various forms adjoin, and the birds found in the area of intergradation possess an intermediate character which often renders them difficult to classify. In a general way, it may be said that these differences have arisen naturally through a gradual modification of the birds in each of various areas, from causes operating over a long period of time. The exact causes in each case may never be known, but the slight "continuous" variations are hereditary and are passed on from generation to generation. This is at least one of the ways in which new species are produced in nature by gradual evolution. On the other hand, the various strains of the domestic turkey have been produced through the agency of man, from a second type of variation known as "discontinuous" or as "mutation." Such variations, which are often strikingly distinct, are seldom seen in nature because they are quickly lost through interbreeding. In domesticated animals and plants, however, man is able to detect these "mutants" or "sports" as they appear and, by mating selected individuals, can perpetuate the desired features. In this manner he has produced the peculiar varieties of the domestic turkey, black, white, buff and others, none of which have counterparts in the races of the wild form.

The Wild Turkey is essentially a bird of the woodlands, seldom wandering far from the protection of groves and thickets and preferring a mixed growth

in swampy regions where a variety of food and facility for concealment are offered. It is irregularly migratory and formerly was much more so than it is at present, when its haunts are more or less encircled by large cultivated areas. In early times, when food became scarce in the northern parts of the Turkeys' range, especially in the autumn, the birds would wander long distances to the richer bottom lands of the Mississippi and other river valleys until they reached a region where food became more plentiful. This gypsy migration was performed by flocks, numbering sometimes a hundred individuals, of which the males always formed a separate body. The females and young remained apart in family groups or composite flocks, but all moved forward in the same direction. They traveled on foot except when rivers were encountered, when the birds took wing and crossed the expanse of water in flight, resuming the march upon the other side. At nightfall, they ascended to the trees and roosted until daybreak, beginning the journey again the following morning. When suitable feeding ground was secured, the flocks spent the winter roaming about and fattening on the nuts and berries which formed their winter food. At such times, they appeared to become somewhat fearless of man and often associated with the domestic fowls about the farm houses. In recent times, the flocking instincts of the species remain the same but the migratory habits are, of necessity, restricted.

About the middle of February or in early March, the mating instincts of the Wild Turkey are aroused and the selection of sexes is begun. The males are quite polygamous, although the females are constant to a single mate. At this season, the "gobblers" strut about, gobbling and puffing, ruffling their feathers and dragging their wings, performing in every way like

their barnyard counterparts to attract the attention of the females. Rival suitors frequently engage in bloody combats which, on rare occasions, may result in the death of one of the contestants. The hens, when they bestow their affections, join the following of the successful suitor and remain more or less in his company until the actual time of nesting begins.

The nesting of the Wild Turkey begins in the middle of March or April. The hen selects a site at the foot of a tree or log, or under the bushes, well concealed from casual observation, and there scoops out a shallow depression which is lined with dead leaves. The "gobbler" renders no assistance at this task. The site is chosen for its dryness as well as for its secrecy, and secrecy marks all the operations in connection with it. Islands are frequently chosen in this regard, for not only are they less open to investigation but, in addition, there is often present a considerable pile of driftwood at the upper end, into which the hen may make her stealthy way when discovery is imminent.

The eggs number from 8 to 15, sometimes 20, and measure about 2⅓ by 1⅘ inches. In color, they vary from pale creamy white to buff, dotted and spotted with pale chocolate or reddish brown, rarely with lilac. Sometimes several females occupy the same nest and sit together, possibly for mutual protection. Audubon records the discovery of such a communal nest which contained 42 eggs. As a rule, however, the hens nest separately. Incubation occupies about four weeks. During that time the hen sits closely, not moving when approached as long as she considers herself unobserved. Should casual notice quicken into interest, she is able to detect the change and escapes hurriedly to a little distance from which she watches the proceedings. When leaving the nest deliberately, she never fails to cover the eggs most carefully with dry leaves

to hide them from discovery. If the nest is disturbed during her absence, she does not usually desert it unless some of the eggs are broken or destroyed. In such case, she abandons the nest, calls for her mate, constructs another nest and again attempts to rear a brood. Otherwise, only one brood is reared each year, at least in the northern regions, and the hen does not associate with the "gobbler" until the following spring.

When the young are about to hatch, the female, according to Audubon, will not leave the nest under any circumstances. The young are active and leave the nest the same day they are hatched. That day or the next, they begin their wandering existence and never return. They are somewhat delicate at first, unusually susceptible to dampness under foot, and for this reason are carefully tended by the mother bird and led, as soon as may be, to higher, drier ground. When two weeks old, they are able to fly sufficiently to reach the lower branches of the trees, and from that time on they roost above ground. As they grow older they wander more widely and, little by little, assemble into the mixed family groups which associate for the winter. During this time, as soon as the females have withdrawn into seclusion to brood and rear their young, the gobblers retire for a period of rest and recuperation. In late summer they also begin to assemble in flocks. Sometimes they are joined, in late winter, by an occasional young male, but the association does not seem to continue for any great length of time and the younger bird goes off by itself or rejoins the family group.

The food of the Wild Turkey consists largely of wild fruits and berries, nuts, acorns, herbs and grass, many kinds of insects, and even frogs and small lizards. Grasshoppers are a favorite article of diet with the half-grown young, and corn and other grains with

the old birds. A thorough study of the stomachs of Wild Turkeys made by the Bureau of Biological Survey, U. S. Department of Agriculture, shows some interesting facts relative to the food of this species. The general conclusions reached by the study are that the Wild Turkey should be considered as beneficial rather than injurious, although the rarity of the birds is such that the actual effect of their activities is negligible. Owing to the fondness of turkeys for swampy bottomlands and for roosting over water, they sometimes find themselves cut off from solid ground through inundation. At such times they may be forced to remain in the tree-tops for days or even weeks, subsisting only on buds and leaves. This works no hardship with them at certain seasons, but at other times, they may become very emaciated before their enforced imprisonment is at an end.

The Wild Turkey is beset throughout its lifetime by a host of enemies. Wolves, foxes, raccoons, opossums, skunks and rats, among the mammals, prey upon the birds according to their size, and rob the nests whenever they find them deserted or can drive away the occupants. Among the birds, the crow destroys the eggs and, sometimes, the young birds, while certain hawks and eagles and the Great Horned Owl attack the half grown young and even the full grown individuals. The Great Horned Owl is said to rouse the sleeping turkeys by its call and, selecting a victim, crowd it off its perch until the bird takes wing, whereupon it follows in pursuit and captures it in flight.

In its relations with man, the Wild Turkey has suffered more than in contact with any other of its foes. From the earliest times in its history, it has been not only an article of food but an object of the chase, and many are the devices and meth-

ods used in its pursuit. It is probably due to some of these methods that the species has been obliged to leave many of its former haunts. At any rate, hunting by the white man rapidly effected a change in the habits of the bird. At one time not unduly suspicious or shy, it soon developed traits which made it one of the most difficult of game birds to approach by ordinary means. The early writers often speak of the Wild Turkey as being, at times, even stupid, but greater familiarity with the white man's ways taught the birds to be more cunning, and Audubon, as early as 1831, described them as extremely shy and suspicious of both white man and red.

Perhaps the principal agency in wholesale destruction was the trap. By its use, large numbers of Wild Turkeys could be secured without difficulty and without particular knowledge or skill on the part of the hunter. The traps were simple, penned enclosures, often built of logs, having as entrance a slightly lifted rail or a shallow trench beneath one side of the structure. Through the opening was laid a trail of corn. The turkeys, feeding head downward, squeezed through the opening and into the trap, but once inside, with heads upraised, they endeavored only to escape above and, except by accident, could not find their way through the opening which gave them entrance.

Shooting the roosting birds by moonlight was often practiced, and required some skill with the rifle, as the game invariably roosted high. Coursing with greyhounds offered sport to another class of hunters and gave a certain amount of excitement since the birds, while fresh, could outrun the dogs or horses. If followed persistently, however, they were soon obliged to stop, exhausted, or were driven to short and shorter flights until overcome. If pressed too closely at the start, their usual course was to take flight to a

distant grove without attempting to run. Coursing was practicable only when the birds had wandered from the woods to feed on the outlying prairie.

Stalking or still-hunting was yet another method of turkey hunting much in favor. It was necessary to use extreme caution in approach, not to set the birds to running. When approached quietly, the turkeys could be seen at some distance, with their heads above the undergrowth, and so picked off with a rifle. If stalked very closely before discovering the hunter, they crouched low and rose suddenly, offering a chance for a wing shot. Tracking in the snow sometimes afforded an easy method of following up the flocks.

One of the favorite methods of hunting the Wild Turkey has been that of "calling." By the use of a hollow wing bone of a turkey, a joint of cane, a leaf placed against the lips or a sharp-edged wooden box with a piece of slate for a scraper, the various notes of the "gobblers" or hens can be imitated with more or less accuracy, depending on the skill of the hunter. The latter, concealed in some suitable spot, calls up the birds and shoots them as they appear. It is necessary to be exact in the imitation, for the turkey is able to detect false notes and imperfections in the counterfeit voice, and either will not respond or may take alarm. Furthermore, a knowledge of "turkey talk" is also essential for the best results, so that the proper call can be used. Each variety of turkey notes has a different significance, and the calls of the hens and young males are distinguishable from those of the old "gobblers". Hence the hunter must vary his performance according to season and circumstance. A young male may not respond to a hen's call note, nor will a "gobbler" reply to a young male. The method of calling probably requires more patience, skill and turkey lore than any other of the hunting practices.

There seem to have been few, if any, attempts to re-introduce the Wild Turkey as a game bird into any of its former haunts. The disappearance of the species from these localities has been due largely to the diminution of suitable ranges for the birds and the unfavorable conditions still remain. Areas, formerly in virgin woodland, have been broken up and deforested, and the solitudes have been shattered by the automobile and the ubiquitous camper-tourist. With the passing of the wilderness, the Wild Turkey has quietly retired to those less inhabited regions where it can still enjoy undisturbed seclusion and wander at will.

Several efforts have been made to introduce the species outside of its former range. In California, for example, on various occasions dating back to 1877, Wild Turkeys have been taken from Mexico and Virginia and released on certain reservations, but most of the birds have disappeared from one cause or another. A few flocks are reported to be still in existence in the Sequoia National Park, where they are tame and fearless. These may prosper under protection, but not as game birds with an open season declared upon them. Likewise, in those areas where the Wild Turkey still exists in natural condition, it may not hold its own for all time so long as there are seasons for hunting it and hunters to pursue it. Although not yet extinct, it must be classed with our vanishing game birds,—in the opinion of those who know it best, the noblest of them all.

JOHN T. ZIMMER,
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BOOKS AND ARTICLES ABOUT THE WILD TURKEY

The literature dealing with the Wild Turkey is so voluminous that it is impossible to quote a complete bibliography. A brief list is here given of a few of the more detailed accounts.

AUDUBON, JOHN JAMES—The Birds of America, Vol. I, pp. 1-17 (Edinburgh, 1831), and other editions.

A long and interesting account of the habits of the Wild Turkey at a time when it was considerably more abundant than at present.

BENDIRE, CHARLES E.—Life Histories of North American Birds (U. S. National Museum, Special Bulletin No. 1, pp. 112-119, 1892).

Accounts of various observers on the nesting and other habits of the U. S. and Mexican Turkeys.

JUDD SYLVESTER D.—The Grouse and Wild Turkeys of the U. S. and Their Economic Value, pp. 48-52 (U. S. Dept. Agriculture, Bureau of Biol. Survey, Bull. 24, 1905).

A study of the food habits of the Wild Turkeys and their allies, based on examination of stomachs.

KING, MAJOR W. ROSS—The Sportsman and Naturalist in Canada, pp. 125-139 (London 1866).

Gives some good descriptions of turkey habits and hunting in Canada.

MCILHENNY, EDWARD A.—The Wild Turkey and Its Hunting (New York, 1914).

An interesting book dealing entirely with the Wild Turkey and its ways.

WRIGHT, ALBERT HAZEN—Early Records for the Wild Turkey (Auk, Vol. 31, pp. 334-358 and 463-473; Vol. 32, pp. 61-81, 207-224, and 348-366, 1914-1915).

A synopsis of references to the Wild Turkey in literature, from the earliest times to about 1870.

The Wild Turkey is shown in a handsome group in Hall 20 of the Field Museum. The group represents a winter scene in Madison Parish, western Louisiana, with a flock of fine "gobblers" in the open woods, strutting, feeding and resting.

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1893
CHICAGO